SOVIET JOURNAL OF COMMUNICATIONS TECHNOLOGY & ELECTRONICS

CONTENTS 1989

Number 1

	English Page	Russian Page
S. Roslonets: Application of the *R*-Transformer in the Synthesis of Band-Elimination Microwave Filters	1	1453
A.M. Krot: Analysis of Linear Dynamic Systems Based on Polynomial Transformations of Numerical Sequences	6	1458
V.A. Borisov and V.V. Voronovich: Effect of the Cutoff Angle on the Power Characteristics of a Generator with a Parallel Shaping Line	13	1466
A.S. Dmitriyev and S.O. Starkov: The Possibility of Modeling Some Properties of Developed Turbulence Using Generators with Delayed Feedback	18	1472
T.N. Fedorovskaya: Efficient Fast Fourier Transform Processors	26	1481
O.Ye. Lomakin, S.V. Mukhin and V.A. Solntsev: Waveguide-Resonator Model of a Slow-Wave Structure in the Form of a Network of Coupled Resonators	31	1637
Yu.K. Rybin and A.L. Baranovskiy: Synthesis of a Dynamic System with Stochastic Self-Excited Oscillations	36	1643
A.P. Trifonov and Yu.V. Nevezhin: Accuracy of Approximation of a Bayesian Algorithm of Simultaneous Discrimination of Signals and Estimation of Their Parameters	44	1651
Yu.M. Bruk, O.M. Ul'yanov and B.Yu. Ustimenko: Separation of Signals and Interference in the Problem of Searching for a Cosmic Radio Emission That is Drifting in Frequency	51	1658
L.Ya. Golov and A.N. Kochubey: Self-Focusing and Nonlinear Refraction in the High-Latitude Ionosphere during Transmission of Energy by a Beam of Microwaves	56	1793
S.N. Antonov, G.N. Shkerdin and Yu.M. Shchukin: Distributed Microwave Modulation of Optical Radiation in Fiber Lightguides	59	1796
V.V. Popov, R.M. Revzin and M.A. Safonova: Properties of Surface Waves of Trough-Shaped Dielectric Waveguide with a Two-Dimensional Semiconductor Magnetoactive Layer	65	1802
A.S. Andreyev, Yu.V. Gulyayev, A.M. Kmita and I.A. Markov: Interdigital Transducers of Surface Acoustic Waves with Submicron Interelectrode Spaces	74	1812
A.B. Valyavskiy, A.V. Vashkovskiy, A.V. Stal'makhov and V.A. Tyulyukin: A Limited Wave Beam of Surface Magnetostatic Waves in a Ferrite-Dielectric-Metal Structure	82	1820
A.B. Valyavskiy, A.V. Vashkovskiy, K.V. Grechushkin and A.V. Stal'makov: Angular Spectrum and Spectrum of Group Velocity Directions of Magnetostatic Waves	90	1830
M.L. Pereyaslavets: Method of Synthesizing a Resonator Field Converter with a Wall of Constant Transmission	95	1835
V.A. Vdovin, S.A. Sokolov and V.A. Cherepenin: Relativistic Čerenkov Oscillator with Two-Wave Interaction	99	2130
V.M. Kuklin, I.P. Panchenko and S.M. Sevidov: Instability of Intense Langmuir Wave in a Cold Plasma	104	2135
P.A. Raykerus and V.A. Gurtov: Space-Charge Buildup Kinetics in Subgate Layers of Metal-Insulator-Semiconductor Systems	109	2141
I.N. Gorbatyy: Boundary Conditions at Diffusion Semiconductor Junctions in the Presence of High Injection Levels	115	2147

SOVIET JOURNAL OF COMMUNICATIONS TECHNOLOGY & ELECTRONICS

CONTENTS 1989

Number 1

	English Page	Russian Page
S. Roslonets: Application of the *R*-Transformer in the Synthesis of Band-Elimination Microwave Filters	1	1453
A.M. Krot: Analysis of Linear Dynamic Systems Based on Polynomial Transformations of Numerical Sequences	6	1458
V.A. Borisov and V.V. Voronovich: Effect of the Cutoff Angle on the Power Characteristics of a Generator with a Parallel Shaping Line	13	1466
A.S. Dmitriyev and S.O. Starkov: The Possibility of Modeling Some Properties of Developed Turbulence Using Generators with Delayed Feedback	18	1472
T.N. Fedorovskaya: Efficient Fast Fourier Transform Processors	26	1481
O.Ye. Lomakin, S.V. Mukhin and V.A. Solntsev: Waveguide-Resonator Model of a Slow-Wave Structure in the Form of a Network of Coupled Resonators	31	1637
Yu.K. Rybin and A.L. Baranovskiy: Synthesis of a Dynamic System with Stochastic Self-Excited Oscillations	36	1643
A.P. Trifonov and Yu.V. Nevezhin: Accuracy of Approximation of a Bayesian Algorithm of Simultaneous Discrimination of Signals and Estimation of Their Parameters	44	1651
Yu.M. Bruk, O.M. Ul'yanov and B.Yu. Ustimenko: Separation of Signals and Interference in the Problem of Searching for a Cosmic Radio Emission That is Drifting in Frequency	51	1658
L.Ya. Golov and A.N. Kochubey: Self-Focusing and Nonlinear Refraction in the High-Latitude Ionosphere during Transmission of Energy by a Beam of Microwaves	56	1793
S.N. Antonov, G.N. Shkerdin and Yu.M. Shchukin: Distributed Microwave Modulation of Optical Radiation in Fiber Lightguides	59	1796
V.V. Popov, R.M. Revzin and M.A. Safonova: Properties of Surface Waves of Trough-Shaped Dielectric Waveguide with a Two-Dimensional Semiconductor Magnetoactive Layer	65	1802
A.S. Andreyev, Yu.V. Gulyayev, A.M. Kmita and I.A. Markov: Interdigital Transducers of Surface Acoustic Waves with Submicron Interelectrode Spaces	74	1812
A.B. Valyavskiy, A.V. Vashkovskiy, A.V. Stal'makhov and V.A. Tyulyukin: A Limited Wave Beam of Surface Magnetostatic Waves in a Ferrite-Dielectric-Metal Structure	82	1820
A.B. Valyavskiy, A.V. Vashkovskiy, K.V. Grechushkin and A.V. Stal'makov: Angular Spectrum and Spectrum of Group Velocity Directions of Magnetostatic Waves	90	1830
M.L. Pereyaslavets: Method of Synthesizing a Resonator Field Converter with a Wall of Constant Transmission	95	1835
V.A. Vdovin, S.A. Sokolov and V.A. Cherepenin: Relativistic Čerenkov Oscillator with Two-Wave Interaction	99	2130
V.M. Kuklin, I.P. Panchenko and S.M. Sevidov: Instability of Intense Langmuir Wave in a Cold Plasma	104	2135
P.A. Raykerus and V.A. Gurtov: Space-Charge Buildup Kinetics in Subgate Layers of Metal-Insulator-Semiconductor Systems	109	2141
I.N. Gorbatyy: Boundary Conditions at Diffusion Semiconductor Junctions in the Presence of High Injection Levels	115	2147

	English Page	Russian Page
V.M. Zhukov and S.A. Polezhayev: Measurement of Electron Field Emission of Structurally Rearranged Point Cathodes	121	2153
V.N. Dmitriyeva, Yu.M. Dvoryanchikov, L.M. Varekha and L.A. Ryzhakina: Multiemitter Field-Emission Cathodes Based on Composite Materials	129	2163
R.A. Lachashvili: Design of Electrostatic Deflection Systems with Deflection Amplification Taken into Account	134	2169
A.Ch. Belyachits, P.D. Kukharchik and V.G. Semenchik: On Improving the Image Quality of a Holographic Systems with a Receiver Aperture in the Form of a Circular Ring	139	2174
BRIEF COMMUNICATIONS		
V.Yu. Snitko: A Thin-Film Waveguide Resonator Based on Shear Surface Waves	142	1537
K.K. Chen: The Number of Resonance Oscillations in a Rectangular Resonator for Microwave Heating	144	1539
V.I. Naydenko and G.N. Shelamov: Bilateral Approximations for the Characteristic Frequencies of Open-Type Waveguide Microwave Resonators	146	1541
V.A. Vanke and A.V. Konnov: A Spiral Twinned Comb with a Large Pitch	149	1544
Yu.D. Chernousov and I.V. Shebolayev: Phasing of Pulsed Magnetron Self-Excited Oscillators Outside the Synchronization Band	151	1546
V.V. Gulenko, A.N. Kondratenko and V.I. Tkachenko: Generation of Surface Waves by Beams of Charged Particles in a Plasma Resonator	156	1551
B.Ye. Zhelezovskiy: Amplification of Multifrequency Signals in an M-Type Traveling-Wave Tube	158	1554
R.Z. Bakhtizin, G.Yu. Kucherbayev, V.M. Lobanov and Yu.M. Yumaguzin: Calculation of Electron Trajectories in Electrostatic Lenses	161	1556
A.N. Kondratenko, V.P. Olefir and Yu.V. Sidorenko: The Conditions for the Excitation of Electromagnetic Waves in Plasma Waveguides with Normal and Anomalous Doppler Effects	163	1559

Number 2

T.E. Krenkel and A.M. Taratorin: The Solution of the Signal-Reconstruction Problem with Constraints	1	1148
V.P. Yakovlev: Correction of the Sidelobes of the Radiation Pattern of On-Board Remote Sensing Equipment	8	1155
R.V. Ostrovityanov and A.A. Monakov: Angular Noise in Multichannel Direction-Finding Systems	14	1161
S.K. Orekhov and V.I. Serebrennikov: An Asymptotic Method of Calculating the Amplitude Distribution of the Product of Two Normal Random Processes with Nonzero Means.	21	1169
Yu.V. Shkvarko and V.L. Kolyadin: Reconstruction of the Scattering Function of an Extended Target from a Bounded Set of Data Obtained by Multichannel Radio Measurements	26	1174
V.A. Kisel': Physically Realizable Minimization of Noise and Distortions in an Ensemble of Channels.	33	1181
L.A. Zhivotovskiy: Decomposition and Analysis of Fluctuating Radar Targets in Antenna Space	38	1186
A.N. Dmitriyenko: Multialternative Deterministic Signal Detection on an Exponential Interference Background	44	1664
Ye.P. Yenina: The Accuracy of the Approximation of Bayes Estimates of Gaussian Random Signal Parameters	48	1669
V.B. Voloshinov, L.A. Kulakov, and O.V. Mironov: Scanning an Optical Image in the Presence of Acousto-Optic Light Filtering	54	2177
BRIEF COMMUNICATIONS		
Ye.A. Monastyrnyy and G.Ya. Patrushev: Cross-Correlation Functions of the Intensity of a Quasispherical Wave in the Presence of a Varying Wind.	59	2183

	English Page	Russian Page
L.P. Yatsuk and A.V. Zhironkina: Scattering of H_{10} Wave Mode by a Dipole-Slot Inhomogeneity in a Rectangular Waveguide	61	2185
M.Ts. Ayvazyan and Yu.N. Kazantsev: Conversion of Operating Modes in Wide Waveguides in the Presence of a Rotation of the Polarization Plane of an Electromagnetic Wave	65	2189
S.Ye. Markov: Approximate Calculation of the Resonance Frequencies of a Segment of an Inhomogeneous Line.	67	2191
N.P. Zhuk: Equivalent Impedance of a Rough Surface of Arbitrary Shape in an Inhomogeneous Medium.	70	2194
Yu.V. Bel'skiy and V.A. Osipenko: Screening Effect of Surface Acoustic Wave in a Layered Structure of a Piezoelectric ZnO Film on Silicon	73	2197
V.G. Astafurov: On the Accuracy of Light Intensity Measurement by the Method of Counting One-Electron Pulses	75	2200
I.G. Anikin and N.D. Danilov: On the Properties of One Range Measurement Algorithm	78	2203
N.B. Groznetskiy and A.L. Shteynberg: Two-Dimensional Probability Density of the Derivative of the Phase of Narrow-Band Stationary Normal Noise	81	2205
L.M. Baskin, Ye.A. Sazonov, L.M. Chernykh, and G.N. Fursey: Influence of Transit Effects on the Parameters of a Microwave Rectified Diode with an Unheated Cathode	84	2208
V.A. Toropin: Investigation of the Competition of Oscillations in Avalanche-Transit Time Diode Oscillators	87	2327
V.M. Korenevskiy: Noise Electromotive Force at High Frequencies for a Field-Effect Transistor with a p-n Junction	91	2332
S.T. Azizov, A.V. Ben'kov, A.V. Zinov'yev, and T. Usmanov: Emission Processes Due to the Action of Moderate-Intensity Laser Radiation on a Metal	97	2338
Ya.M. Bondarchuk, V.G. Leont'yev, V.Ye. Privalov, and G.I. Solov'yeva: Testing of He-Ne Laser Operating at Different $3s$-$2p$ Transitions of Neon	102	2343
I.K. Blokhin, T.A. Gorshkova, and V.A. Kholodnov: Nonlinear Distortions of the Photocurrent of High-Resistance Impurity Photoresistors.	106	2348
Yu.S. Polyakova: Regularized Solution of the Cauchy Problem for the Laplace Equation as Applied to the Solution of Problems in Electron Optics.	114	2355
V.M. Zhukov and S.A. Polezhayev: Changes in the Surface of Point Emitters in Nanosecond Electric Fields.	118	2360
V.G. Kurin, K.A. Lukin, B.K. Skrynnik, and V.P. Shestopalov: Unique Features Associated with the Establishment of Oscillations in Diffraction Radiation Oscillators	123	2366
S.Ye. Bankov, V.F. Vzyatyshev, and Ye.V. Rodionova: Analysis of a Switch Structure for Slotted Dielectric Integrated Circuits.	129	2373
V.M. Pikunov and I.Yu. Kolesnikova: Linear Mathematical Model of a Relativistic Čerenkov-Type Microwave Device	137	2381
T.V. Babkina, Ye.L. Yefremov, and A.D. Shatrov: Investigation of Multimode Glass Fibers with a Complex Refractive Index Profile	145	2390
Yu.V. Gulyayev, Ya.I. Lepikh, and A.N. Kalashnikov: Use of Analytical Method for Investigating the Characteristics of Filters Employing Surface Accoustic Waves	149	2395
A.I. Deryugina, V.N. Kurashov, and A.I. Mashchenko: Polarization Structure of Diffracted Radiation, Propagating in a Turbulent Atmosphere	154	2399

Number 3

Yu.M. Davydov and O.V. Kovalenko: Decoding of Linear Systematic Codes When There are Reliable Characters Present	1	1674
V.P. Bakalov and Yu.Yu. Martyushev: Regularization of a Two-Dimensional Signal Recovery Algorithm Using the Autocorrelation Function	7	1680
Yu.K. Sal'nikov: The Synthesis of Optimum Linear-Derivative Systems of Phase-Shift Keyed Signals	10	1684

	English Page	Russian Page
I.L. Verbitskiy and A.G. Reuka: Out-of-Band Amplification of Surface Electronic Waves Beyond the π-Mode Limit in a Comb Slow-Wave System with Thin Prongs	14	1688
I.I. Minakova and V.I. Panov: Stable Microwave Generators with High-Q Resonators	21	1696
V.A. Syrova: Theory of Relativistic Electron Beams Near Surfaces	30	1706
V.A. Syrovoy: Exact Solutions of the Equations for a Beam Near a Surface	45	1720
M.A. Kuznetsova: Frequency Characteristics of Avalanche Photodiodes with Abrupt p-n Junctions	58	1735
V.M. Zhukov and S.A. Polezhayev: Surface Evolution of Sharpened Field-Emission CAthodes Operating Under Pulsed Conditions	65	1741
V.V. Chapurskiy: Image Reconstruction from One-Dimensional Radioholograms Synthesized at Small Angles of Diffraction	70	1747
A.V. Yurchenko and Ye.D. Belokolos: Choice of the Optimal Optical Signal in Acoustooptical Spectrum Analyzers with Attenuation of Sound	80	1757
I.I. Sinina, Sh.D. Kurmashev, I.M. Vikulin, and V.I. Stafeyev: The Current-Voltage Characteristic of an S-Magnetodiode with an Additional Surface Recombination Zone	88	1765
B.G. Telezhnyy: The Synthesis of a Function Which Approximates the Nonlinearity of a Transmitter Output Circuit	93	1895
L.M. Lifshits: Investigation of Fluctuations in a Thomson Oscillator	97	1899
A.V. Belous: Elimination of Sampling Ambiguity in a Semi-Gaussian Approximation of a Solution of the Stratonovich Equation	100	1902
Yu.G. Sosulin and V.N. Yudin: Joint Filtering of Continuous and Discrete Markov Sequences with Limited Algorithm Complexity	107	1909
L.Ye. Kopilovich: Optimization of Two-Dimensional Aperture-Synthesis Systems	115	1918
A.N. Bruyevich: Calculation of Periodic Solutions When a Harmonic Signal Acts on a Piecewise-Linear System Using an Integral Equation	121	1924
G.G. Berezutskiy, V.I. Medvedev, and P.I. Cherednikov: A Method of Analyzing Nonlinear Parametric Systems	128	1930
R.Z. Bakhtizin, S.S. Gots, and I.M. Chernin-Yakhnyuk: Features of Current Noise Connected with Bulk Processes in Semiconductor Field Emitters	134	1937
A.S. Kyuregyan and P.N. Shlygin: The Influence of Doping Nonuniformity in the Base on the Electric Field Strength in Reverse-Biased p^+-n-n^+ Junctions with Punch-Through	141	1943
Yu.V. Arkusha, A.A. Drogachenko, and E.D. Prokhorov: Investigation of the Frequency Properties of Gunn Diodes with a Nonuniform Temperature Distribution in the Sample	145	1947
Yu.V. Andriyanov, V.N. Bazdyrev, D.A. Borisov, V.M. Zhukov, and V.A. Seliverstov: Field Emission and Burst Electron Emission from Liquid Metal Cathodes in a HF Field	148	1950
BRIEF COMMUNICATIONS		
G.D. Mikhaylov: Amplification of the Third Harmonic of an Electromagnetic Wave When It is Reflected from an Active Plane-Layered Medium	154	1770
V.P. Lyapin: The Current in an Infinitely Thin Diaphragm in a Rectangular Waveguide in the Quasistatic Approximation	157	1773
V.I. Barantsov: Characteristics of Short-Pulse Radar Probing of Deeply Buried Objects	160	1776
G.D. Lobov, S.A. Fedorov, and V.V. Shtykov: Evaluation of the Maximum Transfer Factor of Surface Acoustic Wave Convolvers	163	1780

Number 4

V.P. Meshchanov, L.V. Shikova, and I.V. Metel'nikova: Design of Step Phase Shifters Based on T-Mode Transmission Lines	1	1845
V.I. Gayduk and S.V. Limonova: Initiation of Fluctuations of Molecular Motion in a Polar Medium by Means of a Microwave Field	8	2269
A.B. Goroshchenya and A.M. Polonskiy: Radiation Field and Near-Surface Waves in a Planar Log-Helical Antenna	20	2282

	English Page	Russian Page
M.P. Bakhturin, V.N. Levin, Z.A. Magomedov, and V.I. Pustovoyt: On the Effect of a Structural Inhomogeneity in an Ultrasonic Converter on Its Amplitude-Frequency Characteristic	28	2290
A.N. Bogolyubov and V.V. Lopushenko: Calculation of the Dispersion Characteristics of Graded Optical Fibers by the Finite-Difference Method	33	2296
Yu.I. Abramovich, F.L. Ayzin and M.I. Zelikman: Multilevel Spatial Filtering in Adaptive Arrays	37	2301
A.A. Chukhlantsev: On the Effective Dielectric Constant of Vegetation in the Microwave Band	45	2310
A.A. Berevkin, V.V. Dmitriyev, V.A. Il'in, G.N. Lobova, N.M. Maslennikov, K.Z. Fatykhov, and V.S. Etkin: On the Use of Focused Wide-Band Antennas for Radiohydrophysical Studies	54	2319
V.I. Samoylenko and I.Yu. Lygina: Quasioptimum Stochastic Phasing of Two Separated Oscillators	57	2322
S.A. Vibe: Evaluation of Distortions in Channel with Diode Optron for the Transmission of Wide-Band Analog Signals	61	2563
N.L. Romashin, B.M. Paramonov and V.A. Solntsev: Analysis of Demodulation of Electron Beams by Segments of Slow-Wave Structures	69	2572
Yu.L. Bobrovskiy, S.R. Zarembskiy and N.N. Popova: Design of Three-Dimensional Electron Gaps	76	2582
Yu.I. Bespyatykh, I.Ye. Dikshteyn and A.D. Simonov: Reflection of Surface Magnetostatic Waves from Surface Irregularity of Ferrite Film	84	41
D.I. Mezhuyev: A Theoretical Investigation of the Characteristics of Surface and Subsurface Acoustic Waves in Layered Structures Using the Green's Function Method	90	257
V.A. Girka, I.A. Girka, A.N. Kondratenko and V.I. Tkachenko: Azimuthal Surface Waves at the Boundary Between a Magnetoactive Plasma and a Metal	96	296
S. Rosloniec: On the Design of Multistage Matched Filter Circuits at Microwave Frequencies	100	305
L.G. Korniyenko, Yu.A. Kolos and S.A. Mal'tsev: Effectiveness of Suppression of Partially Polarized Radio Waves by an Autocompensator When the Antennas for the Primary and Auxiliary Channels Differ in Polarization	106	321
M.P. Yegorov and V.S. Andreyev: Synchronization of an Oscillator Whose Output is Simultaneously Amplitude and Frequency Modulated	111	392
S.P. Bugayev, V.I. Kanavets, V.I. Koshelev, V.A. Popov, A.I. Slepkov, A.V. Fedorov, and V.A. Cherepenin: Investigation of a Multiwave Čerenkov Millimeter-Wave Oscillator Producing Gigawatt Power Levels	119	400
L.S. Kuz'min, Ya.S. Levenberg, K.K. Likharev, Ye.V. Nikitina, and Ye.S. Soldatov: Experimental Investigation of the Mutual Synchronization of Josephson Tunnel Junctions	127	419
BRIEF COMMUNICATIONS		
S.N. Shabunin: Green's Functions of Maxwell's Equations for Expansion in Terms of LE and LM Waves Modes for Magnetodielectric Media	132	2412
S.A. Nikitov and S.N. Gavrilin: Dispersion of Surface Magnetostatic Waves, Propagating along a Rough Surface	135	2415
A.S. Rudnitskiy: Solution of Boundary-Value Problems by the Method of Partial Plane Waves	137	2417
Ye.A. Vorobeychik, V.S. Petibskaya, A.A. Chukhlantsev and Zh.G. Yazeryan: Microwave Emission Characteristics of Rice Fields	140	2420
P.A. Bakut, D.V. Makarov, A.D. Ryakhin and K.N. Sviridov: On the Possibility of Reconstructing a Two-Dimensional Image from the Digitized Convolution Equation	142	2422
O.P. Novozhilov: Reversibility Principle of Multiple-Frequency Conversion Using Nonlinear Reactive Elements	144	2424
V.M. Vorob'yev, Yu.G. Dvinin and A.N. Kondratenko: On the Development of a Dissipative Beam Instability in a Plasma Having a Varying Density	147	2427
M.V. Smelov: Formation of the Phase and Amplitude Characteristics of Microwave Devices Employing Magnetostatic Waves	151	2432

	English Page	Russian Page
S.V. Vasil'yev and A.V. Vasyanovich: Use of Nonuniform Static Magnetic Field for Improving Basic Characteristics of Magnetron Oscillator	153	2434
O.A. Mal'tsev and I.P. Nikitin: Propagation of Surface Acoustic Waves in Block-Type Reflector Structures	156	2437
O.V. Bazarskiy, A.S. Glauberman, A.I. Kolesnikov and Ya.L. Khlyavich: Multifrequency Microwave Holography with Spectrum Compression	160	2452
Yu.V. Bondarenko, M.V. Sviridov and V.A. Chirkov: Parametric Resonances at Subharmonics of the Hopping Frequency in Ring Lasers	164	433

Number 5

S.M. Yeremin: The Impedance of an Electric Dipole in an Anisotropic Plasma	1	1852
V.M. Bulkin and S.D. Kremenetskiy: Phase Synthesis of a Radiation Pattern in a Uniformly Logarithmic Approximation	9	1861
Ya.S. Shifrin and Yu.M. Borodavko: Statistics of the Field of a Linear Antenna in the Fresnel Zone	17	1870
B.Z. Katsenelenbaum and M.Yu. Shalukhin: Optimum Current Synthesis on a Circle	25	1878
M.Ya. Mints, Ye.D. Prilepskiy and V.M. Zaslonko: Optimization of the Radiation Power Concentration Factor of an Antenna with a Circular Aperture and a Maximally Flat Radiation Pattern	33	1888
V.V. Osintsev and V.A. Korobkin: Characteristic Electromagnetic Oscillations in a Crossguide with One Arm Partially Filled with a Dielectric	40	2017
A.D. Kopenkin, A.A. Kurayev, A.Ya. Slepyan, G.Ya. Slepyan, and V.A. Cherepenin: Radiation of Waves from the Open End of a Smoothly Irregular Waveguide	45	2022
I.V. Baryshnikov, V.A. Datskovskiy and A.V. Upolovnev: Effect of the Surface Roughness of a Waveguiding System on the HF Losses	51	2029
L.A. Rud': Free Oscillations of an H-Plane Waveguide Tee	57	2034
Yu.I. Pchel'nikov: Equivalent Parameters of a Helix Slow-Wave Structure	64	2042
S.Ye. Bankov and I.V. Levchenko: Equivalent Boundary Conditions for a Closely Spaced Ribbon Grating at the Interface of Two Media	67	2045
A.B. Bogoslovskaya and K.N. Ul'yanov: Effect of Electron Initial Velocities on the Perveance and Electron-Optical Properties of a Gas-Filled Diode with Deep Compensation of Space Charge Formed in Accelerating Gap by Ions	73	132
Yu.N. Brovkin, S.V. Plaksin, L.M. Pogorelaya and V.N. Privalov: Experimental Investigation of the Upper Frequency Limit of Diodes with Intervalley Electron Transport	81	141
A.A. Abramov, I.N. Gorbatyy, S.I. Koshoridze and V.A. Tkachev: Nonlinear Distortions of Harmonic Signal by a Forward-Biased *p-i-n* Diode	86	147
V.I. Vol'man, A.S. Kurkov and L.A. Frenkel': Investigation of Single-Mode Lightguides with a Displaced Zero Dispersion	94	155
O.N. Nayda: On the Question of the Location of "Synchronization Plateaus" in Ring Lasers with Sawtooth Oscillations of the Pedestal	100	162
L.S. Kuz'min, K.K. Likharev, V.V. Migulin, Ye.A. Polunin and N.A. Simonov: Nonlinear Microwave Properties of Hysteresis-Free Superconducting Quantum Interferometers	107	169
A.V. Galdetskiy and A.I. Rogashkova: On the Waves, Determining the Development of a Beam-Plasma Discharge	116	180
A.D. Khzmalyan and A.F. Chaplin: Electrodynamic Model of Microwave Hyperthermia	123	187

BRIEF COMMUNICATIONS

G.M. Aristarkhov and V.P. Chernyshev: Mixed Mode Representation of Microstrip Filters Employing Opposed Rods	128	192
V.P. Meshanov, G.G. Chumayevskaya and I.A. Tsots: Class II Stepped Wave Resistance Transformers [Stepped Transition Units] with the Flattest Possible Amplitude-Frequency Characteristics	131	195

	English Page	Russian Page
P.A. Bakut, A.A. Pakhomov, A.D. Ryakhin and K.N. Sviridov: On a Possible Modification of the Labeyrie Method	134	199
Yu.S. Radchenko and S.N. Moiseyev: Approximate Calculation of Probabilities on the Basis of a Multidimensional Normal Distribution	136	201
A.I. Voronko, G.N. Shkerdin and V.V. Chernyy: Spectral Bistability in Active Media	139	204
Yu.N. Brovkin, S.A. Kostylev and R.G. Shabalina: Influence of Spatial Relaxation Effects on the Dynamics of Domain Instabilities in Diodes with Intervalley Transport	141	207
A.V. Ivanov, V.P. Konyayev and M.V. Eynasto: Calculation of the Spreading Resistance of Cylindrical Photosensitive Mesa Structures	143	209
R.A. Ayukhanov, Yu.V. Gulyayev and G.N. Shkerdin: Use of High-Power Electromagnetic Radiation to Control the Optical Properties of a Crystal in the Exciton Resonance Region	146	212

Number 6

N.Ye. Ivanova, L.N. Loshakov and Yu.N. Pchel'nikov: Investigation of a Radial Helical Resonator Based on a Logarithmic Helix	1	2051
G.A. Vugal'ter and N.S. Khvoshcheva: Reflection of Magnetostatic Waves by a Section of Microstrip Line	5	2055
B.M. Petrov and V.G. Koshkid'ko: A Method of Analyzing Electromagnetic Fields Scattered by a Slot in a Cylindrical Resonator with a Flange	10	2060
O.N. Alifertsev, S.V. Kuz'min and S.A. Fedorov: The Geometry of an Interdigital Transducer for Exciting a Surface Acoustic Wave Waveguide	15	2064
Ye.N. Korshunova, A.N. Sivov and A.D. Shatrov: The Synthesis of a Resonator Antenna with a Spherical External Surface for a Given Vector Radiation Pattern	20	2070
S.N. Vorob'yev, Ye.V. Zamyatin and S.L. Prosvirnin: Scattering of Electromagnetic Waves by a Bounded Strip Array with Random Fluctuations in the Arrangement of the Elements	27	449
V.G. Farafonov: Scattering of a Plane Electromagnetic Wave by a Highly Prolate Perfectly Conducting Spheriod	36	458
A.A. Kirilenko, S.L. Senkevich, Yu.K. Sirenko and B.G. Tysik: On a Reconstruction of the Scattering Matrices of Waveguide and Periodic Structures from the Spectrum of Complex Natural Frequencies	46	468
V.P. Meshchanov and L.V. Shikova: Analysis of Structures of Microwave Devices Based on Two-Ports, Formed from Four-Ports	51	474
Ye.Z. Gribova: On the Structure and Qualitative Composition of the Spectrum of Waves, Reflected from a Rotating Strip	62	485
V.N. Sekistov: On the Feasibility of an Asymptotic Calculation of Arbitrary-Order Longitudinal Statistical Moments of a Field in the Problem of Propagation of Short RF Waves in a Strongly Turbulent Gaussian Medium	71	709
V.A. Neganov, N.G. Safronov and M.V. Terent'yeva: Generation of Algorithms for Calculating Eigenwave Fields of Shielded Stripline Structures	78	721
V.B. Dikhtyar: Self-Synchronization of Oscillations in Systems Described by Autonomous Difference Equations	84	806
I.L. Verbitskiy and A.G. Reuka: Linear Operator Theory of Electron Waves in a Two-Dimensional Periodic Waveguide: The Case of a Weakly Focused Electron Beam	88	811
K.A. Lukin and I.V. Yakubenko: Theory of Nonstationary Processes in a Diffraction Radiation Oscillator in Which the Characteristic Fields Vary Significantly over an Electron Time of Flight	98	830
A.S. Il'inskiy and Yu.G. Smirnov: Numerical Modeling of Slotted Transmission Lines Formed by Waveguides of Different Cross Sections	106	908
G.A. Vugal'ter: Excitation of Short-Wavelength Surface Magnetostatic Waves by a Metallic Strip	114	965
V.F. Zakhar'yash: Phase Synchronization of a Gunn-Diode Oscillator	122	1052
E.B. Abubakirov, N.S. Ginzburg, N.F. Kovalev and M.I. Fuks: Effect of Fast Cyclotron Waves on the Operation of Čerenkov Microwave Devices with Relativistic Electron Beams	129	1058

	English Page	Russian Page
I.M. Akhmedzhanov and S.I. Bozhevol'nyy: Analysis of a Linear Integrated-Optic Bragg Modulator	137	1083
BRIEF COMMUNICATIONS		
V.I. Borisov, A.L. Galanin, V.Ye. Lyubchenko, A.S. Rogashkov and A.A. Telegin: Current-Voltage Characteristics and Nonlinear Properties of Indium Phosphide Gunn Diodes in Intense Microwave Fields	142	2211
D.Ye. Dyshel', B.M. Rud', M.D. Smolin and I.A. Stoyanov: Electrical Conduction in "Doped Tin Dioxide - Glass" Granulated Films	145	2214
Yu.K. Fetisov: Influence of the Static Magnetic Field Orientation on the Dispersion of Magnetostatic Waves in a Ferrite Film	148	2217

Number 7

Yu.A. Yeremin, O.A. Lebedev and A.G. Sveshnikov: Investigation of Mathematical Models of Spatial Diffraction Problems by the Multipole Source Technique	1	2076
Yu.M. Davydov and O.V. Kovalenko: The Use of a Fast Walsh Transform to Decode Linear Systematic Codes with Reliable Characters	8	2084
I.Ya. Kremer and A.M. German: Optimization of Target-Position Prediction Accuracy Using a Single Coordinate and Velocity Vector Sample	15	2091
A.N. Dmitriyenko: Multialternative Nonparametric Signal Detection Using Randomization	20	2097
A.A. Lavrov and B.Ya. Fride: Characteristics of a Radar Method of Measuring Surface Velocity Distribution	25	2103
A.M. Vagapov and V.A. Koval: Optimum Bayes Energy-Projection Receivers of Quasideterminate Signals Isotropic in Hilbert Space	32	2110
A.N. Bruyevich: The Design of Balanced Two-Cycle Piecewise-Linear Systems When Subjected to Harmonic Excitation	39	2118
L.I. Biberman: Linear Theory of Two-Threshold Oscillation	44	2123
N.A. Armand, Yu.P. Semenov, B.Ye. Chertok, V.V. Migulin, V.V. Akindinov, V.I. Aksenov, G.V. Bashilov, P.M. Belousov, V.A. Blinov, E.P. Vyatkin, S.A. Gorbunov, S.M. Yermin, I.V. Lishin, D.S. Lukin, A.V. Moshkov, L.I. Nezhinskiy, V.G. Osipov, V.B. Presnyakov, A.E. Reznikov, Ye.A. Rudenchik, P.P. Savchenko, G.K. Sosulin, S.V. Starostin, N.P. Chubinskiy, A.V. Shabanov, V.A. Shlykov, and I.N. Shugalev: Experimental Study of the Radiation of a Frame Antenna, Placed on the Mir-Progress-28-Soyuz TM-2 Orbiter Complex, at Very Low Frequencies in the Earth's Ionosphere	50	2225
Ya.I. Fel'd: Synthesis of Antenna Feed Currents Based on a Given Current Distribution on the Mirror	58	2234
S.V. Yesin, V.I. Kaganov and A.P. Pirkhavka: A Multidimensional Automatic-Phasing System with Correcting Interconnections in the Regulator	64	2239
V.F. Dmitriyev and B.A. Kalinikos: Self-Consistent Theory of the Excitation of Spin Waves by a Microstrip Antenna in a Tangentially Magnetized Layered Structure	72	2248
O.V. Samsonyuk and A.F. Chaplin: Excitation of an Ideally Conducting Cylinder with an Arbitrary Transverse Cross Section—The Sliding Expansion Point Method	82	2258
V.M. Butorin: A Metal Disk Suspended on a Pin at the Center of a Cross-Shaped Junction of Rectangular Waveguides	86	2263
N.G. Kokodiy: The Connection Between the Spatial and Power Characteristics of Electromagnetic Radiation Scattered by a Cylinder	92	2465
A.N. Yegorov and Ye.V. Ryabtsev: Electrodynamic Analysis of Nonstationary Processes in Thin Cylindrical Antennas with Nonlinear Loads	97	2471
A.I. Nosich and V.P. Shestopalov: Radiation Conditions and Uniqueness Theorems for Open Waveguides	107	2483
V.B. Anfinogenov, T.N. Verbitskaya, Yu.V. Gulyayev, P.Ye. Zil'berman, S.V. Meriakri, Yu.F. Ogrin, and V.V. Tikhonov: Hybrid Electromagnetic-Spin Waves in Contacting Ferrite and Ferroelectric Layers	116	494

	English Page	Russian Page
I.G. Alekseyev, V.I. Fedyanovich and Yu.A. Shestakov: Transparency of Close-Spaced Array of Parallel Overlapping Metallic Strips, Separated by an Insulator Layer	121	499
Yu.M. Sinel'nikov, G.P. Sinyavskiy and Yu.I. Tikhov: Electrodynamic Analysis of Real Waveguide-Slot Line Constructions	127	504
A.A. Kirilenko, Ye.A. Sveridenko and S.L. Senkevich: Rejection Sections Employing Segments of Multimode Rectangular Waveguides	132	509
V.N. Krasil'nikov and A.V. Tyukhtin: Average Boundary Conditions for a Metal Grid in a Moving Cold Plasma	139	517
V.I. Fedyanovich: Weakly Transparent Capacitive Sheet	146	523

Number 8

Ye.S. Pylayev: Distributed Excitation of a Traveling Magnetostatic Wave Accompanying Nonlinear Scattering of Electromagnetic Radiation	1	2492
S.F. Mirkotan, S.V. Zhuravlev, and V.I. Zakharov: Probability Properties of Waves Repeatedly Scattered by a Random Screen	9	2500
Yu.A. Yeremin and N.V. Orlov: The Method of Discrete Sources in Problems of Diffraction by a Solid of Revolution in a Dissipative Half-Space	15	2506
A.M. Kort: A Class of Discrete Processes, Nonstationary Relative to a Generalized Shift Operator	23	2515
I.B. Vlasov and L.N. Parshchikova: Two-Parameter Adaptation in Sequential Signal Detection on a Background of Interference with an Unknown Distribution Law	31	2523
N.P. Mar'in and D.M. Pachikov: Analysis of the Directional Characteristics of an Antenna Array Consisting of Adaptive Subarrays	36	2529
A.A. Garnaker'yan, B.I. Orekhov, V.D. Bukharin, and N.I. Neplo: Effect of the Slopes of a Statistically Rough Surface on a Reflected Signal	45	2537
V.A. Golunov, A.Yu. Zrazhevskiy, and A.G. Pavel'yev: Effect of the Atmosphere and Surface Roughness on the Radiometric Characteristics of Natural Terrain	52	2544
A.G. Ryndyk: Optimization of the Phase Modulation of a Radar Signal with a High Pulse Repetition Rate	59	2551
O.N. Yevdokimov and L.N. Kaptsov: Amplitude Synchronization Threshold and Lyapunov Factor of Stochastic Oscillations of an Oscillator with an Inertial Nonlinearity	66	2558
S.A. Kostylev, I.I. Sokolovskiy, and A.V. Chelyadin: Resonance Features of Gunn Diodes in Subthreshold Fields	71	2579
M.A. Trishenkov, P.E. Khakuashev, and O.N. Kaben'kin: Inertial Properties of n-p-i-p Avalanche Photodiodes	74	2590
Yu.A. Polkanov: The Possibilities for Increasing the Accuracy of Measurements of the Scattering of Optical Radiation in the Atmosphere	82	2599
N.S. Stepanov and S.Ye. Finkel'shteyn: Determination of the Parameters of Extended Moving Objects	86	2603
I.A. Baranova, N.P. Zanadvorov, Yu.A. Flegontov, and S.Ya. Yavor: Edge Effects in Conical Multielectrode Deflecting Systems	90	2607
I.A. Davyatov, A.B. Zorin, and K.K. Likharev: Maximum Sensitivity of Detectors Based on Superconducting Tunnel Junctions	96	2613
V.A. Dianova, V.B. Baglikov, Ye.R. Mustel', V.N. Parygin, and A.Yu. Agamalova: Optoelectronic Amplifier and Generator Based on an Interferometric Modulator	105	2621
Yu.K. Levin: Equivalent Circuit of a Spin Processor in the Three-Pulse Mode	110	2626
A.A. Shatalov, V.A. Ponomarev, and I.V. Shagulin: Adaptive Algorithm of Spatial Wiener Filtering	117	530
V.A. Vlasenko and Yu.M. Lappa: Methods of Increasing the Efficiency of Multidimensional Discrete Fourier Transformation Algorithms	122	535

BRIEF COMMUNICATIONS

G.F. Goltvyanskaya and I.N. Goltvyanskiy: Raman-Nath Diffraction by Transverse Sound in Uniaxial Crystals	133	2634

	English Page	Russian Page
N.N. Voytovich: Synthesis of a Two-Dimensional Antenna Array with a Generalized Separation of Variables	136	2637
A.I. Yefimov, O.M. Korsak, O.I. Yakovlev, V.P. Yakubov, and I.D. Tserenin: The Effect of the Circumsolar Plasma on the Operation of a Long-Base-Line Interferometer	139	2640
V.A. Melititskiy, V.L. Rumyantsev, N.S. Akinshin, and V.A. Oleynik: Some Statistical Characteristics of the Estimate of the Parameter m of Nakagami's Distribution	143	2644
V.N. Makarov: A Quasilaminar Model of a Cylindrical Current in Crossed Fields	146	2646

Number 9

R.G. Akopyan: Parametric Conversion of Electromagnetic Waves into any Heterodyne Frequency with Amplification and without Addition of Noise	1	2409
V.M. Koshevoy: Detection of Signals for Conditions of Interference Having a Spatial Inhomogeneity	4	545
V.I. Karpukhin, A.N. Peshkov, and M.I. Finkel'shteyn: Remote Sensing of Agricultural Crops by Nanosecond Duration Radio Pulses	9	550
V.V. Zayentsev: Analysis of Intermodulation Distortions in a Multichannel Scheme for Adding Nonlinear Microwave Power Amplifiers	16	557
S.V. Kolosov, A.A. Kurayev, and A.I. Shakirin: Comparative Characteristics of Gyroresonant Traveling Wave Tubes, Efficiency-Optimized in the Frequency Bandwidth and Having H_{11} and H_{01} Operating Modes of a Circular Waveguide	21	562
I.L. Verbitskiy and A.G. Reuka: Linear Operator Theory of Electron Waves in Two-Dimensional Periodic Waveguide. General Theory	29	570
M.B. Tseytlin, Ye.A. Myasin, and L.M. Nutovich: Optimization of the Parameters of an Orotron on the Basis of an Approximate Analytical Theory	39	580
V.G. Leyman: Instability of Sheet Electron Beam with Reverse Magnetic Field at Cathode	44	585
A.S. Artamonov and N.I. Inozemtsev: Collective Instabilities of Electron Beam in Magnetic Fields of a Helical Undulator and Solenoid	52	593
V.N. Yevdokimov, A.M. Tyutikov, Yu.A. Flegontov, and A.V. Shimanskaya: Effect of Spread in the Incidence Coordinates of the Electrons of the Input Beam on the Gain and Noise Factor of a Microchannel Multiplier	60	601
N.S. Vernigorov and A.V. Pugovkin: Acousto-Optic Frequency Demodulator	66	628
V.I. Sivozhelezov, O.F. Fomicheva, and A.M. Sverdlova: Injection Mechanism of Altering the Switching Parameters of Metal-Insulator-Semiconductor p-n Junction Structure	70	838
V.E. Germ, N.V. Mileshkina, and Ye.A. Semykina: Modeling the Processes in the Near-Surface Region of the Space Charge of a Semiconductor in an Emission Electric Field	75	843
B.N. Yevtodiy, G.D. Kuznetsov, and N,V. Pleshivtsev: Effect of Ion Bombardment on Orientation and Faceting of Tungsten Layer Crystallites	79	848
S.B. Kuznetsov: Calculation of Magnetic Deflection Systems in the Presence of Ferromagnetic Materials	84	853
A.B. Bogoslovskaya and K.N. Ul'yanov: Calculation of Parameters and Electron Optical Systems of a Gas-Filled Triode with Gas Ionization in the Gap Taken into Account	91	859

BRIEF COMMUNICATIONS

V.L. Litvishchenko: Experimental Investigation of the Characteristics of Resonant Electrodynamic Traps	97	632
Ye.Ye. P'yankov and V.I. Voloshanyuk: Two-Position Effective Scattering Area of a Radially Inhomogeneous Plasma Containing a Perfectly Conducting Sphere	99	634
V.V. Kabanov: On the Interrelationship of the Probability and Intensity Distribution of Outbursts of Natural Radio Noise	101	636

	English Page	Russian Page
B.N. Groznetskiy and A.L. Shteynberg: Correlation Function of the Modulus of a Random Vector with a Maxwellian Distribution	105	640
M.A. Ivanov and I.A. Yakovlev: Probabilty Properties of the Output Signal of Nonlinear Volterra-Type Slow-Response Radio Systems	108	643
R.A. Mishkinis, P.F. Rutkovskiy, V.N. Fedorets, and G.V. Beleninik: Surface Acoustic Wave Oscillator in the Mode-Locking Regime	111	646
G.S. Nusinovich, A.B. Pavel'yev, and V.I. Khizhnyak: Restrictions on the Choice of Optimum Parameters of Gyrotrons for Mode Competition Conditions	114	649
V.P. Abramov and S.L. Klenov: Stratification of the Plasma of a Transverse Hf Discharge in Inert Gases	117	652
Ye.A. Shelomov and V.S. Golikov: On the Correlation Function and Spectra of Random Signals in a Basis of Walsh Functions	120	877
S.I. Pozdnyak: Distribution of the Polarization Selection Coefficient of a Signal in a Background of Noise	123	880
V.Ye. Budanov, O.B. Kalmykova, and N.N. Suslov: Generator of Diffraction Radiation with a Mechanism for Correcting the Feedback Phase	126	883
A.K. Tashatov, B.Ye. Umirzakov, and M.T. Normuradov: Quantitative Variation of the Elemental Composition of the Surface of a Pd-Ba Alloy during Heating in an Ultrahigh Vacuum	128	885
I.F. Burak, Kh.L. Garb, P.Sh. Fridberg, and I.M. Yakover: Matching of Planar Thin-Film Low-Level Microwave Power Converters	131	897
R.K. Babichev and V.I. Zubkov: Effect of Screen on Characteristics of Magnetostatic Waves in a Layered Structure with a Ferrite Film for Arbitrary Magnetic Biasing	137	972

Number 10

G.I. Kolytsov and M.D. Melkonyan: Simple Computer Modeling and Calculation of Breakdown Voltages in Ion-Implanted p-n Junctions	1	1067
V.S. Boldasov, Ye.A. Zhelubenkov, and A.I. Kuz'michev: Physical Processes in a Low-Pressure Diode in the Presence of a High Cathode Emission Current Density	6	1072
I.D. Mitsenko and V.N. Legkiy: Optimziation of the Parameters of a Photoreceiver Channel with Feedback	12	1079
N.A. Armand, I.N. Kibardina, Ye.A. Lobanov, and A.N. Lomakin: Effect of Anisotropy of Atmospheric Inhomogeneities on the Operation of a Multielement Antenna System	17	1121
V.A. Korotkov, A.N. Rukina, and Ye.V. Sukhonin: Closed Rain Model for Predicting the Attenuation Characteristics of Waves along Identical and Spatially Separated Paths	23	1127
G.D. Mikhaylov: Analysis of the Reflection of Radio Waves from an Active Planar Layered Medium	31	1135
Ye.N. Korshunova, A.N. Sivov, and A.D. Shatrov: Vector Theory of Resonator Antenna Synthesis	39	1177
G.S. Makeyeva: Guding Wave Excitations in Thin-Film Ferrite and Semiconductor Layers	47	1184
S.K. Orekhov and V.I. Serebrennikov: Detection Characteristics of Signals with V-Shaped Frequency Modulation	55	1192
Yu.G. Bulychev and S.A. Pogonyshev: Method for Numerical Integration of Multidimensional Fokker-Planck Equation on the Basis of Truncated Fast Fourier Algorithms	60	1241
V.M. Osipenkov: Frequency-Selective Microwave Section, Realizing Attenuation Poles	68	1250
A.V. Aksenchik, I.G. Artyuk, and S.V. Kolosov: Efficiency-Optimized Relativistic Multiresonator Klystrons with Distributed Energy Selection	73	1255
A.A. Kurayev and A.I. Sinitsyn: The Autophase Operating Regime of an O-Type Traveling-Wave Tube	80	1264
Yu.I. Alekseyev: The Nonlinear Distortion Factor of an Oscillator as a Criterion for Conversion Efficiency of Self-Pumped Systems	86	1270
I.M. Korzhenevich and G.V. Kolesov: Temporal Instrument Function of an Electro-Optic System Including Scattering of Electrons by the Accelerating Electrode	89	1273

	English Page	Russian Page
V.A. Ilyin, N.M. Maslennikov, and I.A. Semin: Low-Frequency Relaxation Oscillations in Systems Containing Ladder Networks of Broad-Area Josephson Junctions	97	1282
G.E. Babayan, A.N. Vystavkin, A.L. Gudkov, V.N. Laptev, V.I. Makhov, and G.A. Ovsyannikov: Detector Response of Josephson End Junctions	104	1289
BRIEF COMMUNICATIONS		
A.V. Dobrynin, G.A. Nayda, A.P. Sidorov, and Ye.B. Sokolov: Composite Resonator Based on Aluminum Nitride	111	1091
Yu.M. Tokunov: On the Damping Factor of an Ionization Wave	113	1093
V.V. Zakharov, G.P. Fomenko, and L.F. Chernogalova: Optimization of the Parameters of the Slow-Wave Structure of a Relativistic Magnetron	116	1095
Yu.V. Arkusha, A.A. Drogachenko, and E.D. Prokhorov: Operation of Short Gunn Diodes with Metallic Contact for Supply Voltage of Reversed Polarity	118	1098
S.V. Zharkov, V.I. Petrov, O.A. Prikhod'ko, and G.K. Fil'kin: Effect of High-Power Pulsed Light Fluxes on the Sensitivity of Silver-Oxygen-Cesium Photocathodes	121	1100
A.S. Bagdasaryan, G.Ya. Karapet'yan, and V.F. Kazennov: Filter Based on Stepped Interdigital Transducers of Surface Acoustic Waves	124	1104
M.S. Chernyakov: Excitation Conditions of Digital Parametric Frequency Multiplier	128	1108
I.A. Man'kin: On the Influence of the Space Charge Field in a Traveling-Wave Tube at an Increased Efficiency	130	1110
A.N. Lazarchik: Orthogonalization of the Radiation Modes of a Circular Dielectric Waveguide	132	1296
S.D. Klyachko: On the Equivalence of Waveguide Devices	135	1299
Yu.A. Bunyak: Class of Discrete Orthogonal Systems of Subexponential Functions	137	1300
V.P. Bakalov and Yu.Yu. Martyushev: Improvement of Convergence of an Iterative Algorithm for Reconstructing Two-Dimensional Signals from the Modulus of the Spectrum	140	1304
REVIEW		
V.V. Kashinov: Increasing the Energy Potential of a Radio Channel Through the Use of Radio Signal Transformations by a Differential-Geometric Method	144	1112
G.N. Gromov: Comment on the Letter of V.V. Kashinov: Entitled "Increasing the Energy Potential of a Radio Channel Through the Use of Radio Signal Transformations by a Differential-Geometric Method"	145	1113

Number 11

A.S. Aref'yev, V.N. Gusev, and A.A. Sviyazov: Variation of the Parameters of Gas-Discharge Character-Synthesizing Indicators	1	1439
G.S. Kreynina: Diffraction scattering of Slow Electrons in Krypton	4	1443
P.B. Rabkin: Mathematical Model and Investigation of the Turn-Off Process of *p-n-p-n* Structures in Combination Regime	9	1448
B.M. Gur'yev, V.V. Gusakov, and L.I. Kats: Experimental Investigation of Nonlinear Field Effect in a Semiconductor at Microwave Frequencies	13	1453
V.D. Il'yushin: Chain of Moment Equations for High-Intensity Nonlaminar Electron Streams	19	1460
V.V. Apanasovich and Ye.G. Novikov: Investigation of the Multiplication Process of an Electron Stream in a Microchannel Plate	28	1469
V.A. Kukushkin: Synthesis of Surface Acoustic Wave Filters with Selective Removal of Electrodes from the Amplitude-Frequency Characteristic, Specified Within an Interval of Frequencies	34	1490
A.A. Zatykin, A.V. Mazur, S.K. Morshnev, and A.V. Frantsesson: Stabilization of the Frequency of an Injection Laser by Means of Fiber Fabry - Perot Interferometer	38	1494

	English Page	Russian Page
S.D. Mirovitskaya: Testing of Multilayer Optical Fibers by Means of Scattering Diagrams in Far Zone	44	1500
V.P. Voronenko and N.P. Kerzhentseva: Mathematical Model of Information Channel of High-Speed Transmission Line Employing Single-Mode Lightguide	53	1510
V.P. Chumachenko: A Modified Calculation Method for *E*-Plane Waveguide Circulators with Polygonal Boundaries	61	1581
M.M. Ivanishin: Solution to the Scattering Problem of a Conducting Cylinder Placed in a Rectangular Waveguide	67	1587
D.I. Mezhuev, V.V. Penzyakov, and Yu.Kh. Finkel'shtein: Excitation of Bulk Acoustic Waves in Layered Structures with Thin-Film Slow-Wave Systems	76	1611
Yu.I. Bespyatykh, I.E. Dikshtein, and A.D. Simonov: Propagation of Surface Magnetostatic Waves in a Ferrite Film Covered by a Metallic Half-Plane	83	1618
A.S. Zakalyukin and A.A. Kuraev: A Relativistic Maser Based on Cyclotron Resonance with an E_{01}-Type Working Wave	94	1707
A.M. Ignatov and R.R. Kikvidze: Nonlinear Theory of the Aperiodic Current-Convective Instability	102	1714
A.V. Gritsunov and A.V. Galagan: On the Use of Second-Order Excitation Equations in Modeling a Crossed-Field Oscillator	106	1719
P.B. Rabkin and A.A. Korsmik: Investigation of the Influence of the Parameters of the *p*-Bases on the Static Characteristics of a Latching Thyristor	110	1735
I.M. Vikunin, M.A. Glauberman, V.V. Egorov, N.A. Kanishcheva, and A.Yu. Cherskii: Investigation of Transient Processes in the Base of a Two-Collector Magnetotransistor	118	1743
P.B. Rabkin and S.M. Shabanov: Modeling the Switching-Off Process in Latching *p-n-p-n* Structures Using a Quasi-Two-Dimensional Approximation	122	1747
BRIEF COMMUNICATIONS		
B.V. Bondarenko, A.Yu. Cherepanov, A.G. Shakhovskoy, and Ye.P. Sheshin: Transient Characteristics of the Electron Field Emission Current of Carbon Fibers	131	1307
O.P. Astakhov, V.I. Makukha, and Ye.P. Sheshin: Temperature Regime of Graphite Field Emission Cathodes with a Developed Operating Surface	133	1310
G.A. Vorob'yev and V.I. Zelenskiy: Activation of Metal - Insulator - Metal System and Its Breakdown	135	1312
A.N. Belov, L.T. Remizov, V.S. Safanyuk, and A.V. Elbakidze: Detector of Ultrashort-Wave Radio Emission of Lightning	138	1315
V.I. Dudkin, S.V. Yermak, N.F. Nikiforov, V.Yu. Petrun'kin, and V.V. Semenov: Comparison of the Optical Pumping Signals, Induced by Resonant Radio Field in Pulsed and Stationary Regimes	141	1318
V.A. Vanke, A.A. Zaporozhets, and A.V. Rachnikov: On One Possibility for Reducing Requirements on the Parameters of the Transmitting Antenna of a Space Solar Power System	143	1320

Number 12

V.P. Bondarev and T.I. Bugrova: Diffraction of Electromagnetic Waves by a Dielectric Plate with a Harmonically Modulated Boundary in a Rectangular Waveguide	1	1
G.M. Aristarkhov, A.N. Alekseyev, P.S. Mikhnevich, and V.P. Chernyshev: Functional Possibilities of Structures Based on Slotted and Coupled Microstrip Transmission Lines	6	7
Yu.P. Kalmykov and S.V. Titov: Application of the Method of Memory Functions to Calculate the Rotational Absorption Spectrum of Water Vapor	12	13
V.N. Podshivalov: Nonreciprocal Resonance Absorption of a Wave in a Waveguide Partially Filled with a Semiconductor	20	21
V.P. Meshchanov and I.A. Tsots: New Properties of the Tandem Connection of Sections of Coupled Transmission Lines	27	28
V.A. Kravtsov, G.V. Kravtsova, and O.L. Ulasik: Effect of an Elliptic Cylinder on the Impedance of a Radial Dipole	33	35

	English Page	Russian Page
V.I. Gvozdev, G.A. Kuzayev, Ye.I. Nefedov, and M.I. Utkin: Electrodynamic Calculation of the Basic Elements of Microwave Volume Integrated Circuits Based on an Unbalanced Slotted Line	39	47
Yu.I. Abramovich and V.G. Kachur: Speed of Response of Alternate Adaptive Tuning of Separate Combined Interference Suppression Systems	44	52
A.M. Krot: Spectral Analysis of a Class of Nonstationary Random Processes in Discrete Biorthogonal Bases	51	59
V.V. Savchenko: The Variational Principle in Problems of the Spectral Evaluation and Simulation of Interfering Reflections	60	68
A.G. Churzin: Matched Filtering of a Signal in Radar Stations with Digital Aperture Synthesis	66	74
V.P. Kukharets: Overshoots of the Scattering Cross Section for Radio Waves in the Atmosphere	70	78
B.Z. Katsenelenbaum and M.Yu. Shalukhin: On the Impossibility of Approximating an Arbitrary Field by the Field of a Current Flowing in an Open Surface or Curve	75	225
A.G. Tartakovskiy: Optimum Routines for Joint Detection and Estimation of Random Process "Disordering"	83	326
V.A. Efimov, A.P. Sadovnikov, and S.Yu. Terebulin: Minimum Number of Pulse Repetition Frequencies and Their Values in the Probe Signal of a Pulse Doppler Radar	91	334
V.B. Polyakov and V.V. Safonov: Estimation of the Output Signal-to-Noise Ratio of Time Integrating Acoustooptic Correlometers	95	339
V.P. Illatov, B.Zh. Kamaletdinov, and I.M. Samoylov: Investigation of the Correlation Properties of *M*-Like Sequences and Ensembles	104	348
N.F. Uslugin: Matched Signal Filtering in an Optical Incoherent Correlometer	108	353
V.M. Smol'yaninov and O.O. Kuznetsov: Properties of Signals Based on Binary Linear Codes	115	361
A.M. Krot and E.B. Minervina: Fast Fourier Transform Algorithms for Real and Hermitian-Symmetrical Sequences	122	369
Yu.V. Zhulina: Object Detection with a Probe Signal of Unknown Form by Means of a Reference Source	130	376

Number 13

V.Ye. Kunitsyn, V.A. Smorodinov, and A.B. Usachev: Reflection of Radio Waves from an Arbitrary Ionospheric Layer	1	233
A.A. Chukhlantsev: Modeling of Vegetation by a Collection of Scatterers	7	240
A.G. Kyurkchan: Analytic Continuation in Problems of the Scattering of Waves by Unbounded Surfaces	12	245
V.A. Borovikov: Diffraction of a Field with a Caustic by a Wedge in a Nonuniform Medium	24	264
V.A. Borovikov: The Region of Formation of the Field and Fresnel Volumes	33	273
L.A. Frenkel: Calculation of the Spot Size for the Lowest Model for Estimating Microbend Losses	41	282
A.V. Belinskiy and A.S. Chirkin: The Spatial Configuration of the Fields in Cavities with Optical Phase Conjugation Mirrors	45	286
S.V. Protsko and A.D. Titov: Cavity Resonators in the Form of Right Prisms with a Triangular Transverse Cross Section	50	292
A.Ya. Kirichenko, Yu.V. Prokopenko, Yu.F. Filippov, and N.T. Cherpak: Axially Uniform Azimuthal Modes in Anisotropic Dielectric Resonators	55	300
B.S. Surikov, Ye.A. Khasina, and V.V. Chapurskiy: Correlation and Spectral Functions of One-Dimensional Radio Holograms Synthesized at Small Diffraction Angles	60	409
V.Ya. Plekin and M.M. Lednev: Time-Frequency Signal Filtering Against a Background of Interference with Unknown Correlation Properties	70	979
V.N. Chibisov: Estimation of the Energy Parameters of Permutation-Modulated Signals in Incoherent Communications Systems	77	986
A.N. Yur'ev: Synthesis of Stochastic Signal Detection Algorithms for Signals Represented in the State Space	82	990

	English Page	Russian Page
L.A. Rassvetalov: Suppression of Non-Gaussian Interference in an Echo-Processor	89	997
G.L. Okon, B.A. Per, and A.N. Shpolyanskiy: Application of Variable Pseudorandom Sequences to Signal Detection	94	1002
A.V. Bessalov: Statistical Characteristics of Periodic Correlation Functions of Multiposition Minimum-Shift FSK Signals	101	1008
L.N. Konovalov and I.D. Merkulenko: Nonparameteric Signal Detection and Counting Algorithms for Output Signals from an Equidistant Antenna Array	108	1016
A.A. Mal'tsev and A.M. Silaev: Optimum Estimates of the Times of Random Irregular Variations in Signal Parameters	116	1023
V.M. Frolushkin: Calculation of the False Alarm Probability for Signal Detectors with an Unmatched Whitening Filter	125	1033
L.V. Bulakhova, A.M. Kukebaev, and Yu.B. Sindler: Multichannel Two-Stage Signal Search Routine with Coherent Accumulation in Stages	130	1038
Yu.G. Basov and S.M. Pechenegov: Optical Pumping Sources Based on a High-Frequency Electrodeless Discharge (A Review)	136	1793

Number 14

V.I. Merkulov, V.A. Efimov, and O.N. Tomilin: A Generalized Sensitivity-Estimation Algorithm for Letov-Kalman-Optimized Radioelectronic Tracking Systems	1	83
S.I. Zakharov: Maximum Likelihood Detection of a Quasideterministic Signal Against a Background of Gaussian Autoregression Interference with Unknown Parameters	7	89
Yu.G. Bulychev and A.A. Korotun: Application of a Set of Invariants to Solve the Problem of Bearing Identification in Angle-Measuring Systems	15	96
I.A. Zaulin and V.P. Ponomarenko: Analysis of Dynamic Processes in Static Synchronization Systems	24	106
M.P. Egorov and V.S. Andreev: Theory of the Locking of an AM Self-Excited Oscillator Based on a Negative-Resistance Nonlinear Element	33	115
L.V. Dubovoy, G.S. Luk'yanchikov, and R.Z. Fayzullin: Certain Potential Possibilities of Multibeam Microwave Devices and Methods of Designing Them	40	121
A.F. Kurin: The Dynamics of the Electric and Magnetic Components of the High-Frequency Field in the Case of Interaction with Moving Charges	45	126
S.Sh. Petker: Digital Filter for Suppression of *m* Interference Signals at Given Frequencies	51	1228
V.S. Barmak: Statistical Properties of Correlator Output Interference	55	1232
V.M. Temnov: On Constructing the Field in Problems of Wave Diffraction by Bends in a Rectangular Waveguide	65	1809
V.I. Sergiyenko, G.I. Modestova, Yu.S. Myasnikov, L.I. Chirkova, and A.V. Shabel'nikov: Analysis of Experimental Studies of Refraction Anomalies at Large Zenith Distances at Optical and Radio Frequencies	73	1817
A.S. Medovikov and G.Yu. Khacheva: Effect of Atmospheric Absorption Lines on the Measurement of Distances with Light Rangefinders	77	1822
L.S. Kazanskiy: Investigation of the Properties of the LC Networks, Used in the Pattern-Forming Circuits of Antenna Arrays	82	1827
S.A. Vyzulin, A.E. Rozenson, and S.A. Shekh: Magnetostatic Wave Pulses in Multilayered Structures	91	1835
S.A. Vyzulin, V.N. Popov, A.E. Rozenson, and S.A. Shekh: Transfer Function of Magnetostatic Wave Devices	95	1839
N.I. Bushulkin, V.I. Zakharov, and S.F. Mirkotan: Radio Signal Carrier Frequency Shift Effect in Vicinity of Maximum Electron Density of Ionosphere Layer	101	1845
M.V. Kuzelev, V.A. Panin, and A.P. Plotnikov: Multimode Amplification of Waves in a Plasma Waveguide with a High-Current Relativistic Electron Beam	107	1918
G.N. Korostelev and L.S. Sotov: Complex Dynamics of Oscillators Employing Gunn Diodes with a Low-Frequency Circuit	114	1925

	English Page	Russian Page
A.V. Tyukhtin: Averaged Boundary Conditions for a Grid of Parallel in a Hot Plasma	118	1929
N.S. Ginzburg: Radiation Channeling by a Sheet Beam of Electron-Oscillators in Generator Schemes Employing Free-Electron Lasers	124	1935
V.P. Degtyareva, V.V. Ludikov, V.A. Podvyaznikov, and V.K. Chevokin: On the Question of Determining the Effective Duration of a Frame in Electron-Optical Converters with a Grid Shutter	128	1945
G.E. Bugrov, Ye.A. Kral'kina, V.A. Obukhov, and Ye.S. Sitin: Experimental Study and Numerical Modeling of Processes in a Plasma Emitter of Xenon Ions Having a Peripheral Magnetic Field	135	1952

Number 15

Yu.I. Abramovich and V.G. Kachur: Analysis of the Convergence of a Tunable Vector in Adaptive Techniques Employing Inversion of the Maximum Likelihood Estimates of Correlation Matrices	1	311
Yu.I. Abramovich, V.G. Kachur, and V.N. Mikhaylyukov: The Convergence of Directivity and Its Stabilization in Fast Spatial Filter Adaptive Tuning Procedures	6	316
D.I. Lekhovitskiy and E.Z. Sakhnovskiy: Adaptive Filter Parameter Adjustment Rate for the Case of Quasiharmonic Input Signals	11	385
Ya.N. Fel'd: Diffraction of Electromagnetic Waves by "Non-Rayleigh" Bodies with Zero and Impedance Boundary Conditions	19	1569
V.N. Voytovich and Yu.P. Topolyuk: Synthesis of Axisymmetrical Resonator with a Spherical Outside Surface Starting from a Given Amplitude Directivity Pattern	25	1575
A.I. Yefimov, O.I. Yakovlev, A.S. Vyshlov, A.S. Nabatov, S.N. Rubtsov, and A.D. Sheverdyayev: Spectral Line Broadening of Decimeter and Centimeter Radio Waves during Radio Communication with the Venera-15, 16 Spacecraft through the Plasma Surrounding the Sun	31	1596
B.M. Minkovich and M.Ya. Mints: Directivity Patterns of a Circular Aperture Having Maximum Flatness	38	1604
N.A. Armand and Ye.A. Lobanov: Correlation of the Frequency Fluctuations of Radio Waves, Propagating in a Turbulent Atmosphere	46	1628
A.I. Nosich and A.Ye. Svezhentsev: Physical Features of Wave Propagation in Cylindrical Slot and Strip Lines	51	1633
V.V. Blagodarnyy: Investigation of Emission from Metallic Electrodes by Means of the Volt-Ampere Characteristic of the Vacuum Gap	60	1723
Yu.Ya. Kozlovskiy, L.N. Neustroyev, and V.V. Osipov: On the Theory of a Vertical Monopolar Photoresistor	66	1729
V.S. Kulakov, Yu.I. Nikitin, Ye.Yu. Nikiforova, and L.N. Preslenev: Acousto-Optic Demodulation of Signals with Relative Phase-Shift Keying	73	1756

BRIEF COMMUNICATIONS

A.P. Korshikov: Detection of a Random Signal on a Background of Non-Gaussian Interference with Nonideal Learning Interference Samples	77	425
L.M. Lifshits: The Estimation of Oscillation Parameters	80	428
M.A. Zakharov, M.I. Molchanov, and A.V. Pereverzev: Experimental Investigation of Difference Frequency Fluctuations in a Two-Mode Ring Laser	81	429
Yu.V. Bondarenko, M.V. Sviridov, and V.A. Chirkov: Parametric Resonance at the Subharmonics of the Frequency Pedestal in Ring Lasers	84	433
L.I. Andrikanis, N.S. Bunina, and M.Z. Melikov: The Results of an Investigation of a High-Voltage Multibeam Centrifugal-Electrostatic Shaping Electron-Optical System	86	435
V.A. Dianova, V.B. Baglikov, E.R. Mustel, V.N. Parygin, and A.Yu. Agamalova: A Tunable-Carrier Optoelectronic RF Pulse Shaper	89	438
S.I. Ziyenko: A Universal Functional Switching Model of High-Voltage, High-Speed Regenerative Switches	92	442
V.A. Vanke, A.V. Konnov, and V.L. Savvin: Bandwidth Expansion of a Circularly Polarized Field Traveling-Wave Tube	93	1517
A.G. Shul'man: Generalized Expressins for the Electrical Field Distribution within a Below-Cutoff Cylindrical Tube with RF Slots	95	1519

	English Page	Russian Page
A.M. Bukharova, I.V. Lishin, and R.K. Sorokina: Input Impedance to a Low-Frequency Loop Antenna in a Magnetically Active Plasma	98	1522
N.A. Azarenkov and A.N. Kondratenko: Surface Waves in Gyrotropic Plasma Layers Bounding a Metal	101	1525
V.A. Girka, I.A. Girka, A.N. Kondratenko, and V.I. Tkachenko: Azimuthal Surface Modes of Isotropic Plasma Waveguides	103	1527
D.B. Kanareykin and V.A. Polyanskiy: Decomposition of a Fluctuating Target into Statistically Independent Polarization-Stable Targets	105	1530
D.S. Dobryak, E.A. Vershinin, and I.G. Vyskrebtsov: Amplitude-Time Characteristics of Atmospherics	110	1534
Yu.V. Arkusha, A.A. Drogachenio, and E.D. Prokhorov: Uniform Field Conditions in Subcritically Doped Gunn-Diodes with a Metallic Cathode Contact	113	1538
V.M. Koleshko and V.V. Barkalin: The Tensoeffect in Acoustoelectronic Devices Based on Monocrystalline Gallium Arsenide	116	1541
S.S. Berberyan: Quasi-Optical System with a Mach-Zehnder Interferometer	118	1543
B.G. Katkov: Signal Processing for Multielement Arrays Using Acoustooptoelectronic Correlators	120	1545
L.E. Nazarov, V.M. Smol'yaninov, and M.V. Sorochinskiy: Analysis of Sliding Spectrum Calculation Algorithms in Spectrum Analyzers	123	1548
E.G. Isadzhanyan and G.N. Shkerdin: Optical Bistability in a Nonlinear Distributed Fabry-Perot Resonator	125	1550
S.V. Boritko, V.S. Veretin, G.D. Mansfel'd, A.A. Lavrenov, and V.N. Nagirnyak: Acoustoelectronic Convolver Based on a Layered Piezoelectric-Semiconductor Film Structure	128	1553
A.Yu. Aleksandrov, A.N. Zalogin, S.M. Kozel, V.N. Listvin, and R.V. Yushkaytis: Determination of the Polarization Conservation Parameters in Anisotropic Monomode Optical Fibers	130	1556
V.V. Rozanov, A.S. Chirkin, and N.K. Shelkovnikov: Effect of Vibrations in a Laser Velocimeter on the Signal Spectrum	133	1559
A.A. Mal'tsev and A.M. Silaev: Commonents on the Paper "Optimum Detection of Signals with Random Irregular Parameter Variations"	135	1562
M.F. Zlotnikov and L.A. Olesov: Results of an Investigation of the Conditions for the Appearance of Radio Paths for Long-Range Propagation of Ultrashort Waves Near the Ground	137	1760
V.P. Chumachenko: Substantiation of One Method of Solving Two-Dimensional Problems Concerning the Diffraction of Electromagnetic Waves by Polygon Structures, Uniqueness Theorem	140	1763

Number 16

A.K. Morozov: Reception of Recurrent Signals in a Multipath Channel by Means of the Viterbi Algorithm	1	767
A.B. Kuz'min: Features of the Practical Implementation of a Linear Filter for Estimating Gaussian Random Signals	8	774
R.T. Yakupov: Optimum Estimation of the States of Stochastic Discrete Linear Dynamic Systems with Time Delays When There are Unknown Parameters	14	780
B.G. Andreyanov and Yu.Ye. Sedel'nikov: The Use of Reconstruction Methods to Incrase the Angular Resolution of Radiometer Measurements	19	786
V.I. Tikhonov and I.S. Teplinskiy: Quasioptimal Tracking of Maneuvering Objects	24	792
Ye.A. Shelomov: Discussion of Correlation Functions and Spectra of Harmonic Signals in the Walsh Function Basis	30	798
N.S. Ginzburg, A.S. Pikovskii, and A.S. Sergeyev: Randomization of Electromagnetic Radiation in Systems with Convective Instability in the Electron Beam	38	821
V.V. Matrosov and V.P. Ponomarenko: Investigation of the Dynamic Behavior Regimes of a Two-Loop System for Synchronization of a Complex Signal	47	1886
V.V. Blatov: Errors in Estimates of Signal Frequency from the Instantaneous Frequency of the Process	56	1896
V.D. Yeremka, v.A. Zhurakhovskiy, and V.P. Shestopalov: High-Orbit Peniotron with Direct Gyroresonance	60	1900

	English Page	Russian Page
A.A. Terent'yev, V.P. Yeremin, Ye.M. Il'in, and V.B. Bayurin: Numerical Modeling of Cylindrical Dematron Amplifiers with Automatic Regeneration of the Electron Beam at Collector	67	1907
A.I. Afanas'yev, S.I. Ivanov, A.V. Kulakov, and N.S. Kurashev: Analysis of the Electron Displacement of the Frequency of Magnetron Oscillators with a Nonuniform Magnetic Field	72	1912
Yu.G. Smirnov, S.V. Kulakov, and S.A. Zabuzov: Surface Acoustic Wave Filters with Fan-Shaped Transducers	78	1912
BRIEF COMMUNICATIONS		
V.D. Karlov, V.B. Kadykov, A.A. Mozhayev, and S.I. Trubayev: Effect of Radio Signal Self-Interaction in the Lower Ionosphere on Antenna Directivity	83	865
O.A. Mal'tsev, A.V. Medved, and I.P. Nikitin: Propagation of Acoustic Surface Waves in Waveguides with Periodic Inhomogeneities	86	868
A.G. Yushchenko: Representation of the Field and Calculation of the Resonant Frequencies in Waveguide Cavities Partially Filled with a Dielectric	88	870
B.M. Liberman: Calculation of the Complex Permittivity and Radio Brightness Temperature of Multicomponent Electrolyte Solutions at Microwave Frequencies	92	874
V.N. Pozhidayev and A.V. Shabel'nikov: Interference Attenuation of Centimeter Waves Along Paths Close to the Earth's Surface	95	1967
R.A. Ayukhanov and G.N. Shkerdin: Diffraction of Surface Polaritons in Metal-Insulator-Metal Three-Layer Structures	99	1971
V.E. Arutyunyan, K.N. Kocharyan, R.M. Martirosyan, V.G. Priryan, and E.L. Sarkisyan: Investigation of Mode Composition and Dispersion Characteristic of a Millimeter-Band Planar Dielectric Waveguide	102	1974
G.S. Makeyeva, O.A. Golovanov, and S.N. Baryshev: Anisotropic Semiconductor Dielectric Strip Waveguide	104	1976
A.S. Dmitriyev, Yu.N. Orlov, and S.O. Starkov: Evaluation of Dimension Characteristics of Strange Attractors in a Self-Excited Ring Oscillator with Delay	107	1980
V.M. Pavlov and Yu.S. Rasshcheplyayev: Algorithms for Correcting Ionospheric Error in Radio Altimeters	110	1983
A.D. Lapidus: On Choosing the Modulation Frequency in a Radiometer	113	1986
A.S. Pikovskiy: Experimental Investigation of the Transition of a Signal to Chaos in a Network of Nonlinear Amplifiers	116	1989
A.V. Gusev and V.V. Kulagin: Excess Noise in Parametric Regenerative Reflection-Type Amplifiers with a Single Input Loop	118	1991
Yu.G. Bulychev, S.A. Pogonyshev, and K.A. Chasnyk: Optimum Space-Time Processing of Signals Using Fast Fourier Transform Algorithms	122	1994
I.D. Bagbaya, I.N. Sisakyan, and A.B. Shvartsburg: Phase Effects in Microwave Diagnostics of a Semiconductor Plasma	125	1998